VA Health Services Research: What is it? How does it help Veterans?

Seth Eisen, M.D., MSc., Director, HSR&D

FHP&R VSO-MSO Roundtable

October 25, 2007

Biographical Sketch: S. Eisen

- Internist, rheumatologist
- St. Louis VA Medical Center Staff Physician since 1979
- Professor, Internal Medicine & Psychiatry, Washington University School of Medicine
- Research Interests: (a) Impact of military experience on physical & psychological health; (b) genetic & environmental contributions to psychiatric disorders; (c) “pharmcovigilance”.

Presentation Outline

- Overview of Office of Research & Development (ORD)
- What is Health Services Research?
- Describe several HSR programs
- Describe HSR research priorities
- What type of PTSD related research is being performed?

Congressionally Mandated Mission of the Office of Research & Development (ORD)

“To discover knowledge and create innovations that advance the health and care of veterans and the nation.”

ORD Research Categories

- Biomedical Laboratory – Tim O’Leary
- Clinical Science – Tim O’Leary
- Rehabilitation Medicine – Mickey Selzer
- Health Services Research – Seth Eisen

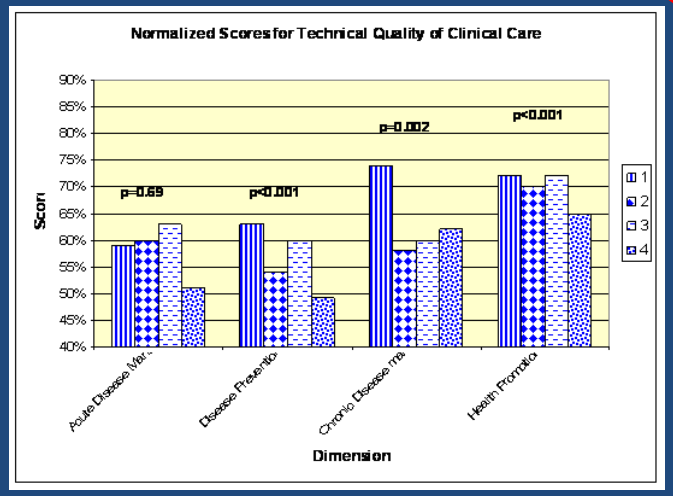
Health services research (HSR) is a multidisciplinary field of basic and applied inquiry that examines:

- *access,*
- *use,*
- *patient preferences,*
- *quality,*
- *delivery,*
- *organization,*
- *costs & financing,*
- *clinical practice, and*
- *outcomes of health care services.*

Fundamental Goal of VHA: Provide the Highest Quality Care to Veterans

Basic Laboratory Research

Clinical Research: Understand Disease thru Human Research



Health Services Research

Quality Health Care

Health Services Research Involves Collaboration Among:

- Clinical epidemiologists
- Clinical researchers
- Organization researchers
- Implementation researchers
- Statisticians
- Informatists
- Psychologists
- Sociologists
- Economists
- Public health experts
- Clinical ethicists

Health Services Research is a vital component of the bench-to-bedside research team.

VA Workload: 2006

Provided by 1400+ Points of Care

Characteristic	Daily	Annual
• Outpatient Encounters:	450k	129 M
• Inpatient Discharges:	2k	0.6 M
• Pharmacy Fills:	600k	172 M
• Chemistry Lab Tests:	900k	250 M
• Radiology Procedures:	475*k*	135 M

Data Added to VHA Computer Database

Information Characteristic	Added per Workday	Added in 2006
• Progress Notes, Discharge Summaries	*+638k*	874 M
• Orders	*+955k*	1.65 B
• Images	+884k	590 M
• Vital Signs	*+729k*	1.06 B
• Inpt Meds Administered	+607k	850 M

Statistics through December 2006

Electronic Medical Record

VistA CPRS in use by: Brown,Steven H (BROKERSERVER)

File Edit View Tools Help

ZTEST,PATIENT DELTA | **Visit Not Selected** | TEST TEAM / Brown,Steven H | Remote Data | Postings **WAD**

000-00-0004 Dec 07,1899 (101) | Provider: BROWN,STEVEN H

Active Problems

- Atrial Fibrillation
- Gastritis
- Arrhythmia
- Congestive Heart Failure
- Constipation
- Elevated Psa
- Low Back Pain * (icd-9-Cm 724.2)

Allergies / Adverse Reactions

- Lasix
- Haldol
- Penicillin
- Feathers
- Milk
- Aspirin
- Bee Sting

Postings

Allergies	
Pt Has Conservator	Mar 26,01
Clinical Warning	Mar 15,01
Do Not Resuscitate	Mar 02,01
Rx Refill Followup	Sep 29,00
Rx Refill Followup	Sep 27,00
Research Subject	Mar 03,00

Active Medications

No active medications found

Clinical Reminders

	Due Date
V9 Annual/High A1C	DUE NOW
V9 Diabetic Eye Referral	Feb 02,00
V9 Depression Screening Positive	DUE NOW
V9 CHF with A-Fib	DUE NOW

Recent Lab Results

Inr - Fingerstick (na) Blood, Capillary Sp Lb #587551	
Urinalysis* Urine Sp Lb #488391	Jan 08,01

Vitals

T	99.2 F	May 10,01	(37.3 C)
P	82	May 10,01	
R	18	May 10,01	
BP	132/76	May 10,01	
HT	72 in	May 10,01	(182.9 cm)
WT	220 lb	May 10,01	(100.0 kg)

Enter Vitals

Appointments / Visits / Admissions

Jun 13,01 10:00	Mu-Test	Checked
May 23,01 14:44	Kn-Tele Care/Ancillary/Knox	Ch
Apr 18,01 09:31	Zzz-Ch-Akmal(chatt)	Checked
Mar 14,01 14:07	Kn-Telephone/Pharmacy/Knox	Ch
Jan 31,01 14:30	Na-Telephone Consults/Pharm	Ch
Jan 22,01 08:30	Mu-2507 Medical Exam Clinic	Ch

Cover Sheet | Problems | Meds | Orders | Notes | Consults | D/C Summ | Labs | Reports | Forms

Start | Dialups | VA programs | CPRS - Patient Chart | 7:46 AM

VistA CPRS in use by: Brown,Steven H (BROKERSERVER)

File Edit View Action Options Tools Help

ZTEST,PATIENT DELTA 000-00-0004 Dec 07,1899 (101) | **Visit Not Selected** Provider: BROWN,STEVEN H | TEST TEAM / Brown,Steven H | Remote Data | Postings WAD

Default List

Jun 14,01	PSYCHOLOGY INPATIENT, MU-TEST, JACQULINE D
Jun 14,01	PSYCHOLOGY INPATIENT, MU-TEST, JACQULINE D
Jun 14,01	PRIMARY CARE CLINIC (PCC), MU-TEST, Gordon Akin
Jun 13,01	RECREATIO/MUSIC THERAPY AS, MU-TEST, KARLA
Jun 13,01	+ PRIMARY CARE ORDERS, MU-TEST, MARIANNE M
Jun 12,01	TRANSDISCIPLINARY ASSESSMENT, NA-TELEPHON
Jun 12,01	TRANSDISCIPLINARY ASSESSMENT, ZZZ-CH-AKMAI
Jun 11,01	21 DAY CERTIFICATION, MU-2507 MEDICAL EXAM CL
Jun 11,01	21 DAY CERTIFICATION, MU-2507 MEDICAL EXAM CL
Jun 11,01	21 DAY CERTIFICATION, MU-2507 MEDICAL EXAM CL
Jun 11,01	21 DAY CERTIFICATION, MU-2507 MEDICAL EXAM CL
Jun 08,01	MEDICAL STUDENT'S NOTE, KN-TELE CARE/ANCILL
Jun 04,01	PRIMARY CARE ORDERS, KN-TELE CARE/ANCILLAF
May 31,01	+ ATTENDING PHYSICIAN (MEDICINE), KN-TELE CAF
May 24,01	23 HOUR OBSERVATION ADMISSION, KN-TELE CAR
May 23,01	TELEPHONE TRIAGE - KNOXVILLE (TP), KN-TELE CA
May 23,01	WOMENS HEALTH H&P, NA-C&P/ENT, SHAWN P HA
May 22,01	COPC GENERAL, CH-BALLARD(CHATT), ERNEST R F
May 21,01	NUTRITION - NUTRITION SCREENING, MU-2507 MEI
May 10,01	TRANSDISCIPLINARY ASSESSMENT, NA-TELEPHON
May 10,01	ED RECORD - DIET/DIABETES, NA-TELEPHONE CON
May 10,01	+ NURSING GENERAL, BO-BOWLING GREEN/HARRI
May 09,01	NURSING ADMISSION ASSESSMENT, MU-2507 MED
May 09,01	APHERESIS NURSING NOTE, ZZZ-CH-AKMAL(CHATT
May 09,01	PRIMARY CARE - FOLLOW-UP, ZZZ-CH-AKMAL(CHAT
May 02,01	NURSING NOTE, ZZZ-CH-AKMAL(CHATT), LINDA M M
May 02,01	KNOXVILLE OPC - NURSING ASSESSMENT, ZZZ-CH-
Apr 30,01	23 HOUR OBSERVATION ADMISSION, NA-TELEPHOI
Apr 30,01	NURSING PATIENT ASSESSMENT, ZZZ-CH-AKMAL(C
Apr 30,01	COPC GENERAL, CH-NEW PATIENT(CHATT), Debbie
Apr 26,01	ATTENDING PHYSICIAN ADMISSION NOTE - RESIDE
Apr 25,01	KNOXVILLE OPC - REYNOLDS/COMMUNICATION, KN
Apr 18,01	NURSING GASTROENTEROLOGY, ZZZ-CH-AKMAL(C
Apr 17,01	RETINOPATHY SCREENING, PRIMARY CARE/RES (F
Apr 11,01	MEDICAL STUDENT'S NOTE, CH-BALLARD(CHATT),
Apr 11,01	NURSING PRIMARY CARE ASSESSMENT, , MELANIE
Apr 09,01	ADMISSION CHECK-OFF SHEET - NURSING, , JUNE \
Apr 09,01	NURSING PATIENT CARE RECORD, KN-TELEPHONE
Apr 06,01	NURSING GENERAL, KN-TELEPHONE/PHARMACY/K
Apr 06,01	NURSING GENERAL, KN-TELEPHONE/PHARMACY/K
Apr 05,01	NURSING GENERAL, KN-TELEPHONE/PHARMACY/K
Apr 05,01	NURSING GENERAL, KN-TELEPHONE/PHARMACY/K
Apr 05,01	MENTAL HYGEINE CLINIC - GENERAL NOTE, KN-TEL
Apr 05,01	GENERAL PREVENTIVE MEDICINE, KN-TELEPHONE

New Note

Visit: 06/13/01 PSYCHOLOGY INPATIENT, MU-TEST, JACQULINE D BETHANY, MS (Jun 14,01@13:21)

```
       TITLE: PSYCHOLOGY INPATIENT
DATE OF NOTE: JUN 14, 2001@13:21     ENTRY DATE: JUN 14, 2001@13:21:26
      AUTHOR: BETHANY,JACQULINE D  EXP COSIGNER: LIMA,PAUL P
     URGENCY:                          STATUS: COMPLETED

Awake, t and oriented.  OOB x    4 today
Up ad lib

ajsldkfalkf                    alksjdflaksjdf                weklrjasldk

CAGE ASSESSMENT:
   DATE:  06/12/2001
      No  C  felt need to Cut down
      No  A  felt Annoyed by criticism
      No  G  Guilty about drinking
      No  E  ever had an Eye-opener

CAGE ASSESSMENT:
   DATE:  06/12/2001
      No  C  felt need to Cut down
      No  A  felt Annoyed by criticism
      No  G  Guilty about drinking
      No  E  ever had an Eye-opener

/es/ JACQULINE D BETHANY, MS          /es/ PAUL P LIMA
Psychology Trainee                    Staff Psychologist
Signed: 06/14/2001 13:28              Cosigned: 06/14/2001 15:08
```

NEW PATIENT 99201 PROBLEM FOCUSED
Diagnoses: Arrhythmia, Congestive Heart Failure, Constipation (Primary), Elevated Psa, Low Back Pain * (ICD-9-CM 724.2)
Procedures: Immunization Administer, Single, Immunization, Tetanus(V03.7) - Diagnostic Site To Hospital, VARICELLA VIRUS VAC

Cover Sheet | Problems | Meds | Orders | Notes | Consults | D/C Summ | Labs | Reports | Forms

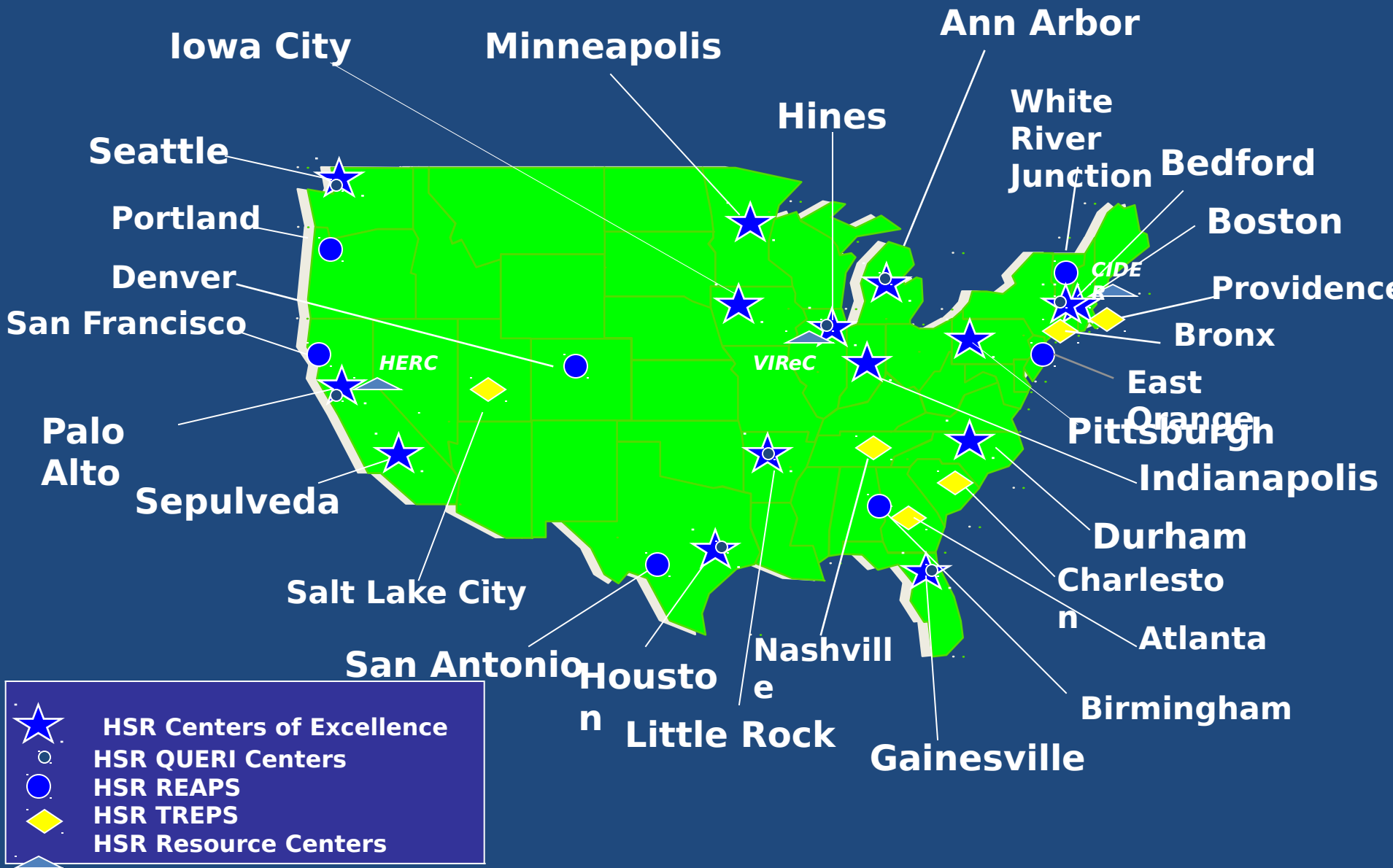
HSR Research Priorities

- Post-deployment Health
- Mental Health
- Home Bound Veterans & Informal Caregiving
- Access & Rural Health
- Women’s Health

HSR Research Priorities

- Equity
- Complex, Chronic Conditions
- Quality Measurement
- Informatics
- Health Services Genomics
- Implementation

HSR&D Centers



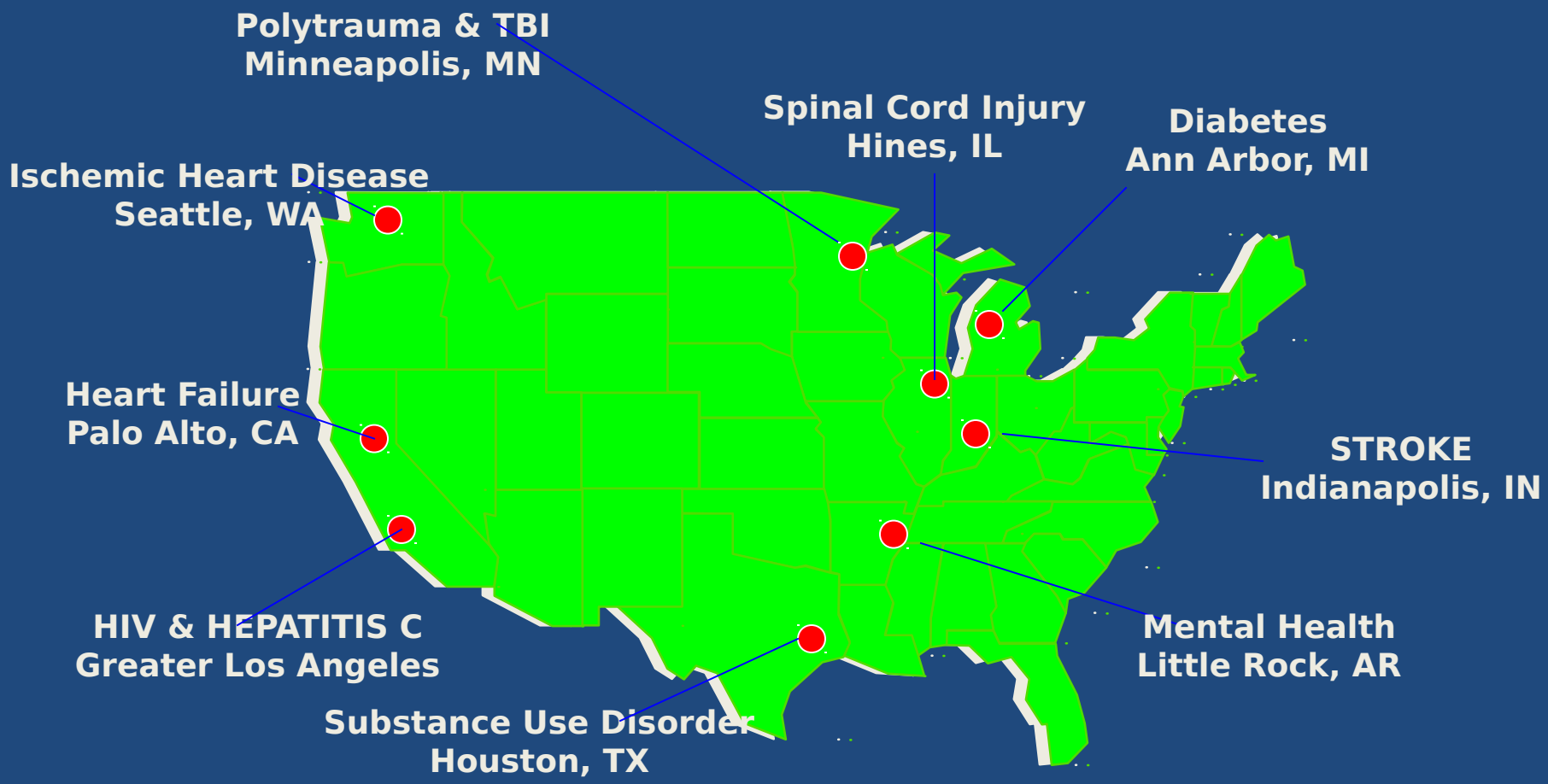
QUERI

Quality Enhancement Research Initiative

QUERI Mission

To enhance the quality, outcomes, and efficiency of VA health care by systematically facilitating the ***implementation*** of evidence-based research findings into routine clinical practice

QUERI Coordinating Centers



Summary of VA HSR Research Strengths

- Large national system,
- Outstanding researchers,
- Strong academic affiliations,
- Ready access to assistance through Centers of Excellence and Resource Centers,
- Electronic medical record,
- Accessible, centralized and regional clinical databases,
- Organizational structure that facilitates *implementation*.

TIME

Posted Sun

CHRIS USHER FOR TIME

The Veterans Administration Medical Center now features portable rolling computer tables that give doctors real-time access to patients' records, X-rays and other visuals as they make their rounds.

From the Magazine | Nation

How VA Hospitals Became The Best

No longer a nation's shame, veteran care is acing competitors

By DOUGLAS WALLER

Most private hospitals can only dream of the futuristic medic

Dr. Divya Shroff practices today. Outside an elderly patient'

room, the attending physician gathers her residents aroun

The New York Times

Health

WORLD | U.S. | N.Y. / REGION | BUSINESS | TECHNOLOGY | SCIENCE | HEALTH

Value of Cholesterol Targets Is Disputed

By RONI RABIN

Published: October 17, 2006

A provocative review paper published this month has raised questions about the aggressive chol

years ago by a governme

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JUNE 2, 2005 VOL. 352 NO. 22

A Vaccine to Prevent Herpes Zoster and Postherpetic Neuralgia in Older Adults

BACKGROUND

The incidence and severity of herpes zoster and postherpetic neuralgia increase with age in association with a progressive decline in cell-mediated immunity to varicella–

We tested the hypothesis that vaccination against VZV would de-

of herpes zoster and postherpetic neuralgia

The authors' affiliations are listed in the Appendix. Address reprint requests to Dr. Oxman at the Shingles Prevention Study (Mail code 111F-1), VA San Diego Healthcare System, 3350 La Jolla Village Dr., San Diego, CA 92161, or at mnoxman@ucsd.edu.

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The New York Times

Health

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Link Between Diabetes and Alzheimer's Deepens

By DENISE GRADY

Published: July 17, 2006

Several new studies suggest that diabetes increases the risk of Alzheimer's disease, adding to a store of

disorders

Annals of Internal Medicine

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IMPROVING PATIENT CARE

Comparision of Quality of Care for Patients in the Veterans Health Adminstration and Patients in a National Sample

Elizabeth A. McGlynn, PhD; Mary M. Hogan, PhD; Rodney A. Ha

esey, BA; John Adams, PhD; and Eve A. Kerr, MD, MPH

141 Issue 12 | Pages 929-94

HealthHospitals

The Best Medical Care In the U.S.

How Veterans Affairs transformed itself—and what it means for the rest of us

BY CATHERINE ARNST

RAYMOND B. ROEMER, 83, has earned his membership in "the greatest generation." A flight engineer during World War II, his B-24 was shot down over Potsdam during a bombing run. He managed to parachute out, but the jump landed him in enemy territory. Roemer spent 11 months in a German POW camp until he was liberated by General George S. Patton's troops in April, 1945.

A month later he came home to Buffalo with a Purple Heart and a few crushed vertebrae from that parachute jump. He married his high school sweetheart, started a successful metal-fabricating business, and signed up for health benefits with Blue Cross/Blue Shield. He can afford to be treated at any of some 20 well-regarded hospitals in the area, but

is a hellish health-care world, understaffed, underfunded, and uncaring. They couldn't be more wrong. According to the nation's hospital-accreditation panel, the VA outpaces every other hospital in the Buffalo region. "The care here is excellent," says Roemer. "I couldn't be happier, and my friends in the POW group I belong to all feel the same."

LOWER COSTS, HIGHER QUALITY

ROEMER SEEMS TO HAVE stepped through the looking glass into an alternative universe, one where a nationwide health system that is run and financed by the federal government provides the best medical care in America. But it's true—if you want to be sure of top-notch care, join the military. The 154 hospitals and 875 clinics run by the Veterans Affairs Dept. have been ranked best-in-class by a number of independent groups on a broad range of measures, from chronic care to heart disease treatment to percentage of members who receive flu shots. It offers all

Because the VA treats patients for life, it has incentive to invest

JAMA®

The Journal of the American Medical Association — To Promote the Science and Art of Medicine and t

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Vol. 295 No. 24, June 28, 2006

Grand Rounds at the University of California, San Francisco Medical Center

CLINICIAN'S CORNER

Depression and Cardiovascular Disease

Healing the Broken-Hearted

JAMA. 2006;295:2874-2881.

ABSTRACT

Major depressive disorder is a risk factor for the development of

outcomes in patients with established heart disease. Depression

congestive heart failure, yet the majority of cases are not reco

cardiovascular outcomes, but antidepressant treatment with selective

of life. This article evaluates the importance of major depression in pa

treating this disorder.

IMPROVING PATIENT

Diabetes Care Quality in the Veterans Affairs Health Care System and Commercial Managed Care: The TRIAD Study

Background: No studies have compared care in the Department of Veterans Affairs (VA) with that delivered in commercial managed care organizations, nor have studies focused in depth on care somewhere for chronic, outpatient conditions.

Results: Patients in the VA system had better scores than

tients in commercial managed care on all process measures

example, 81% vs. 83% for annual hemoglobin A1c; P = 0.0

91% vs. 75% for annual eye examination; P < 0.0001.

VA Researchers featured in

JAMA®

The Journal of the American Medical Association

Author in the Room

Moving Research into Action

PSA Screening Among Elderly Men With Limited Life Expectancies

Louise C. Walter, MD; Daniel Bertenthal, MPH; Karla Lindquist, MS; Badrinath R. Konety, MD

Will My Patient Fall?

David A. Ganz, MD, MPH; Yeran Bao, MD; Paul G. Shekelle, MD, PhD; Laurence Z. Rubenstein, MD, MPH

PTSD - Definition

An anxiety disorder that develops after exposure to a terrifying event in which grave physical harm occurred or was threatened.

- Reliving the event through intrusive thoughts, nightmares, flashbacks,
- Avoiding activities, thoughts, feelings that remind the person of the event,
- Loss of interest in important activities, feeling along, difficulty having normal emotions,
- Feeling the necessity for being always on guard, trouble sleeping, feeling irritable, easily startled, trouble concentrating

VA Research Advances PTSD Treatment and Understanding

- VA Research is strongly committed to making progress in preventing and treating PTSD through rigorous scientific investigations
- Research continues to define the causes, course, treatment, and prevention of PTSD.

PTSD Research Throughout the Pipeline

- Pre-clinical studies using animal models are supported in multiple laboratories
- Laboratory-based work includes neuroimaging and physiological reactivity studies
- Health Services studies include investigating barriers and facilitators to treatment and telemedicine and case monitoring

Examples of Current PTSD Research
General Issues:

- Effectiveness of screening and treatment for PTSD in patients with substance use disorder
- Participation in PTSD: Who starts, who stays, and who drops out
- Barriers and facilitators to PTSD treatment seeking
- Efficacy of mantram repetition on PTSD symptoms
- Effectiveness of Risperidone for unremitting PTSD,
- Effectiveness of Prazosin for sleep disturbances in PTSD,

Examples of Current PTSD Research Women Issues:

- Military sexual trauma effects on PTSD and Health Behavior
- Physical and sexual assault in deployed women: risks, outcomes, and services
- Gender and medical needs of OIF/OEF veterans with PTSD

Examples of Current PTSD Research Access Issues:

- Reengineering systems for the primary care treatment of PTSD
- Telephone care as a substitute for routine psychiatric medication management
- Telephone case monitoring for veterans with PTSD
- Telemedicine and anger management groups for PTSD veterans in the Hawaiian Isla

Research Design Problem: Assessing Health Prior to Deployment

- Three studies are currently being funded that collect data prior to and following deployment.
- The goals of these studies are to provide understanding of risk and resistance factors, and prevention of PTSD

Neuropsychological Outcomes of Army Personnel Following Deployment to the Iraq War

Jennifer J. Vasterling, PhD
Susan P. Proctor, DSc
Paul Amoroso, MD, MPH
Robert Kane, PhD
Timothy Heeren, PhD
Roberta F. White, PhD

Author Affiliations: Southeast Louisiana Veterans Health Care System and Tulane University School of Medicine, New Orleans (Dr Vasterling); VA Boston Healthcare System and Boston University School of Public Health, Boston, Mass (Drs Proctor, Heeren, and White); US Army Research Institute of Environmental Medicine, Natick, Mass (Dr Proctor); Madigan Army Medical Center, Fort Lewis, Wash (Dr Amoroso); and VA Maryland Health Care System and University of Maryland School of Medicine, Baltimore (Dr Kane).
Corresponding Author: Jennifer J. Vasterling, PhD, Research Service (COSF), Southeast Louisiana Veterans Health Care System, 1601 Perdido St, New Orleans, LA 70112 (jvaster@tulane.edu).

JAMA, August 2, 2006—Vol 296, No. 5

Table 3. Demographic and Contextual Sample Characteristics at Time 1*

Variable	Deployed (n = 654)	Nondeployed (n = 307)	Total (N = 961)
Age, mean (SD), y	25.0 (5.3)	24.9 (5.1)	25.0 (5.2)
Race/ethnicity†	285 (43.6)	105 (34.5)	390 (40.7)
White	369 (56.4)	199 (65.5)	568 (59.3)
African American	106 (16.2)	43 (14.1)	149 (15.6)
Hispanic American	96 (14.7)	27 (8.9)	123 (12.8)
Asian American	17 (2.6)	15 (4.9)	32 (3.3)
Other	66 (10.1)	20 (6.6)	86 (9.0)
Women	54 (8.3)	28 (9.1)	82 (8.5)
Education, mean (SD), y	12.5 (1.3)	12.5 (1.3)	12.5 (1.3)
Years in Army, mean (SD)	4.1 (4.2)	3.9 (3.8)	4.0 (4.1)
Rank (enlisted)	641 (98.0)	300 (97.7)	941 (97.9)
Junior enlisted (E1-E4)	479 (73.2)	231 (75.2)	710 (73.9)
Noncommissioned officers (E5-E9)	162 (24.8)	69 (22.5)	231 (24.0)
Officers (commissioned or warrant)	13 (2.0)	7 (2.3)	20 (2.1)
Previous operational deployment	72 (11.0)	33 (12.1)	105 (11.4)
Married	297 (45.4)	146 (47.6)	443 (46.1)

Conclusions

Deployment is associated with:

- Reduced proficiency in sustained attention and memory
- Heightened negative feelings
- Increased feelings of confusion and tension
- Improved reaction time
- No evident effects on: fine motor speed, high level cognitive function, depression, fatigue, or vigor.

Long-Term Consequences of PTSD

"A Twin Study of the Course and Consequences of PTSD in Vietnam Era Veterans"

- Follow up of 3500 Vietnam era veteran twin pair members of the Vietnam Era Twin (VET) Registry
- Mail questionnaires and telephone interviews will assess physical (CDV, diabetes) and mental (PTSD, depression, anxiety, substance use) health outcomes

ORIGINAL INVESTIGATION

Bringing the War Back Home

Mental Health Disorders Among 103 788 US Veterans Returning From Iraq and Afghanistan Seen at Department of Veterans Affairs Facilities

Karen H. Seal, MD, MPH; Daniel Bertenthal, MPH; Christian R. Miner, PhD; Saunak Sen, PhD; Charles Marmar, MD

Arch Intern Med. 2007;167:476-482

Author Affiliations:
Departments of Medicine (Dr Seal), Epidemiology and Biostatistics (Dr Sen), and Psychiatry (Dr Marmar), University of California, San Francisco, and Health Services Research and Development Research Enhancement Award Program (Mr Bertenthal), San Francisco VA Medical Center, San Francisco (Drs Seal, Miner, Sen, and Marmar).

Psychiatric Diagnosis Prevalence as a Function of Gender and Race/Ethnicity

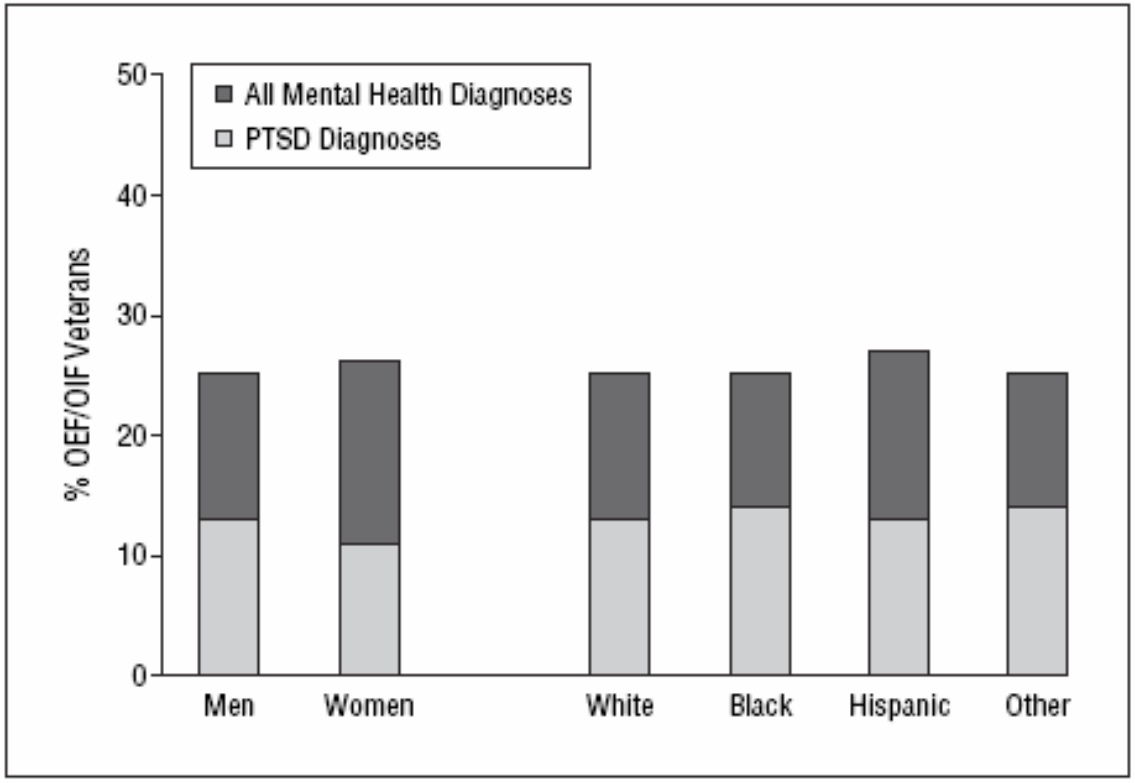

Figure 1. Posttraumatic stress disorder (PTSD) and mental health diagnoses by sex and race. OEF/OIF indicates Operations Enduring Freedom and Iraqi Freedom.

Psychiatric Diagnosis Prevalence as a Function of Age and Service

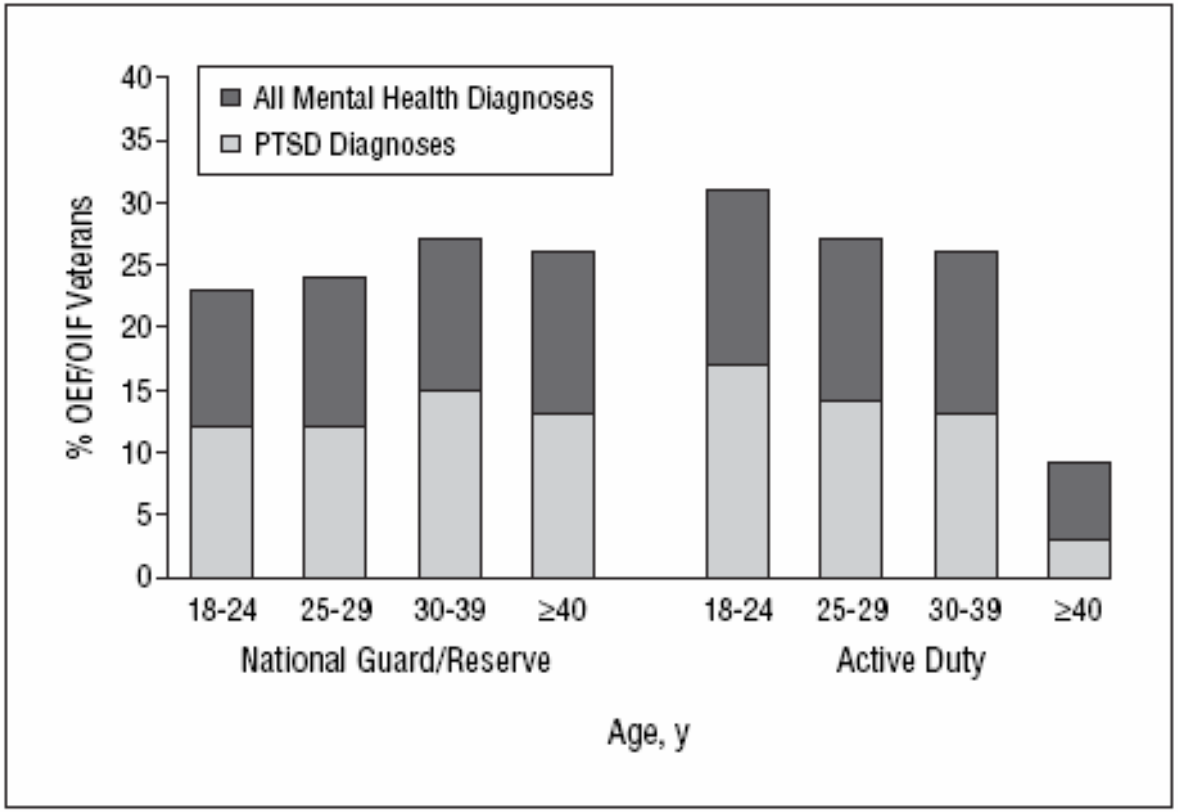

Figure 2. Posttraumatic stress disorder (PTSD) and mental health diagnoses by age group stratified by military component. OEF/OIF indicates Operations Enduring Freedom and Iraqi Freedom.

Summary

- The ORD and HSR&D have vital roles in assisting the DVA to provide the highest quality care to veterans
- The research issues being investigated are diverse, and all have civilian applications
- Understanding how to provide the highest quality care to OEF/OIF veterans is a critical objective
- Increased DoD / ORD collaboration is important to veterans health